Amendments To The Specification:

In the English translation document, please delete the term --Description--at page 1 line 1, before the title.

In the English translation document, please add the paragraph at page 1 line 4, after the title, as follows:

--CROSS REFERENCE TO RELATED APPLICATIONS

This application claims priority to European application No. 02023472.0 EP, filed October 21, 2002, and which is incorporated by reference herein in its entirety.--

In the English translation document, please add the section heading at page 1 line 4, after the newly added CROSS REFERENCE TO RELATED APPLICATIONS section, as follows:

--FIELD OF INVENTION--

In the English translation document, please amend the paragraph at page 1 lines 5-11 as follows:

The invention relates to a turbine engine having a turbine shaft which has a number of adjacently arranged disks to each of which a number of ~~moving~~ blades can be fastened in a star arrangement, wherein said ~~moving~~ blades can be cooled by means of at least one coolant which flows through coolant channels inside the ~~moving~~ blades, and to a method for cooling these ~~moving~~ blades.

In the English translation document, please add the section heading at page 1 line 12, as follows:

--BACKGROUND OF INVENTION--

In the English translation document, please amend the paragraph at page 1 lines 13-25 as follows:

Turbine engines are used in many fields, principally as drives in the aviation industry and for energy production. In energy production, a distinction is made between gas turbines and steam

turbines, which are both used, often simultaneously in so-called gas and steam installations, for driving generators. In the gas turbine, which is examined below, a fuel/air mixture is ignited in a combustion chamber, from where the working medium produced in this process expands in the direction of the ~~moving~~ blades, performing work as it passes said ~~moving~~ blades. The energy of the working medium is converted by means of the ~~moving~~ blades into kinetic energy, which, upon rotation of the turbine shaft, is relayed to generators.

In the English translation document, please amend the paragraph at page 2 lines 4-16 as follows:

Thermal endurance, a long service life and reliability are also required of the ~~moving~~ blades of a turbine engine. In order for the ~~moving~~ blades in the first row of ~~moving~~ blades, viewed in the direction of flow of the working medium, to withstand the highest thermal loadings, they are cooled in a known manner. For this purpose, they generally have cavities running through them, said cavities forming a branched system of channels in which a coolant flows. Either compressed air or steam, or else both simultaneously, is/are used as a coolant. Steam exhibits better cooling properties than compressed air. However, steam places higher demands on the sealing of the complete cooling system, which means higher production costs with regard to conduction of the coolant.

In the English translation document, please amend the paragraph at page 2 lines 18-32 as follows:

It is known that ~~moving~~ blades can be air-cooled and/or steam-cooled. Air cooling can take the form of open as well as closed cooling, but steam cooling is appropriate only as a closed cooling system. When ~~moving~~ blades of a turbine engine are cooled, the substantial difference in pressure between working medium and coolant can be maintained only by means of a high level of technical resources. In order to close off areas from one another, a costly sealing system is required along the conduction pathway of the coolant, so as to limit leakage losses and thereby ensure efficient cooling. Disadvantageous here is the enormous economic and technological outlay required for this purpose, which on top of everything leads to a reduction in operational dependability and reliability on account of the complicated technology.

In the English translation document, please amend the paragraph at page 2 line 34 to page 3 line 2 as follows:

Supplying coolant to individual ~~moving~~ blades in the various rows of ~~moving~~ blades is very difficult, due to the arrangement of the individual elements concerned, and demands a high outlay in order to guarantee the required sealing of the system and a low operating risk.

In the English translation document, please add the section heading at page 3 line 3, as follows:

--SUMMARY OF INVENTION--

In the English translation document, please amend the paragraph at page 3 lines 18-34 to as follows:

The invention is based on the calculation that the operating risk can be reduced by simplifying the coolant feed to the ~~moving~~ blades. The resulting advantageous reduction in the number of seals and simultaneous shortening of the remaining length of sealing increases operational dependability, lowers the probability of failure and reduces leakage losses of the coolant. In addition, simpler sealing systems can be used which likewise reduce the operating risk. Multiple coolants of differing quality flow in the individual cavities between two adjacent disks; these are "fresh" coolants like fresh air and/or live steam which are conducted to the ~~moving~~ blades and/or "used" coolants like used air and/or used steam which are conducted away from the ~~moving~~ blades. The simple and reliable provision of coolants permits the efficient use of said coolants and consequently enables a profitable increase in efficiency, since the components exposed to the working medium withstand higher temperatures.

In the English translation document, please amend the paragraph at page 4 lines 5-9 to as follows:

An absolutely tight and secure connection is advantageously obtained if the integrated coolant channels of each ~~moving~~ blade arranged on one and the same disk communicate via a radial bore or passage with one and the same cavity which is enclosed by means of an adjacent disk.

In the English translation document, please add the paragraph at page 5 line 36, as follows:

--BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows a section through a gas turbine--

In the English translation document, please add the section heading at page 5 line 36, after the newly added BRIEF DESCRIPTION OF THE DRAWINGS section, as follows:

--DETAILED DESCRIPTION OF INVENTION--

In the English translation document, please amend the paragraph at page 6 lines 1-12 to as follows:

The single Figure in the drawings shows a section through a gas turbine 17 along the axis of rotation 2 of the turbine shaft 1. Arranged adjacently on the turbine shaft 1 are the disks 3, 4 and 5. Fastened to each of these disks 3, 4 and 5 are ~~moving~~ blades 14 grouped in ~~moving~~ blade rings 16 of the first, second and third turbine stage. Each turbine stage is formed by a vane ring mounted on the stator 18 in conjunction with a ~~moving~~ blade ring 16 downstream of this vane ring, viewed in the direction of flow of the working medium A. Also, the guide vanes 15 are supplied with fresh air via an external supply not shown, which is represented by the direction-of-flow arrows 10.

In the English translation document, please amend the paragraph at page 6 lines 14-19 to as follows:

The partially shown combustion chamber 19 of the gas turbine 17 runs into the flow channel 11 of the working medium A. During operation of the gas turbine 17, the working medium A flows, coming from the combustion chamber 19, through the flow channel 11. As it does so, it flows past guide vanes 15 and performs work on the ~~moving~~ blades 14.

In the English translation document, please amend the paragraph at page 6 line 21 to page 7 line 2 as follows:

The disks 3, 4 and 5 arranged adjacently on the turbine shaft 1 enclose between them cavities 8, 9, 20 which encompass the turbine shaft in the shape of a ring. The inner cavity 8 lies radially inward relative to the middle cavity 9. In an outward radial direction, the outer cavity 20 encompasses the middle cavity 9. The inner cavity 8 is sealed relative to the middle cavity 9 by means of a centrifugal-force-based seal 6 which is likewise sealed relative to the cavity 20 via a centrifugal-force-based seal. Not shown is that the centrifugal-force-based seal consisting of a sealing wire is laid on both adjacent disks in a chamfer in order to position these securely. The inner cavity 8 has a bore or a passage 7 via which the cavity 8 communicates with the supply terminal of the integrated coolant channel of the ~~moving~~ blades 14. The inner cavity 8 thus serves to supply coolant to the ~~moving~~ blades 14. The cavity 9 likewise has a bore 7, which communicates with the outlet terminal of the integrated coolant channel of the ~~moving~~ blades 14, for discharging coolant.

In the English translation document, please amend the paragraph at page 7 lines 4-18 to as follows:

The coolant flow is explained with reference to the second turbine stage 22. Live steam flows, shown by the arrows 12 indicating the direction of flow of the live steam, from a coolant source axially along the turbine shaft 1 as far as the inner cavity 8 which is formed between the disks 3 and 4. The live steam is conducted through the radially running bore 7 which runs through the disk 4 to a supply terminal of a ~~moving~~ blade 14 of the second turbine stage 22. In the ~~moving~~ blade 14, the live steam has a cooling effect and leaves this ~~moving~~ blade via the outlet terminal. The other radial bore 7 arranged at the outlet terminal conducts the used steam, shown by the direction-of-flow arrows 13, to the middle cavity 9, which is enclosed by the disks 4 and 5. From there, the used steam passes through an axial channel to a further cavity 23, from where it is evacuated.

In the English translation document, please amend the paragraph at page 7 lines 20-25 to as follows:

From a fresh-air source not shown, fresh air 10 is conducted through the guide vanes 15 to a cavity 20 which is located radially further outward than the cavity 9. From this cavity 20, the

fresh air is fed to the ~~moving~~ blades 14. The fresh air blown out at the trailing edge of the ~~moving~~ blades 14 then mixes with the working medium A of the gas turbine 17.